TRANSMISSION VERIFICATION REPORT

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DOES NOT CONTAIN
NATIONAL SECURITY INFORMATION (E.O. 12065)

FAX TRANSMISSION

United States Environmental Protection Agency (USEPA)
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TOTAL PAGES: 19 including coversheet

TO: [redacted]
COMPANY: [redacted]

DATE: May 14, 2018

FROM: Gloria Odusote

RE: Sanitized SAT and Engineering reports

COMMENTS:

SAT Report for Case # P-18-0116

General

[redacted]	[redacted]				
Report Status:	Complete	Status Date:	03/02/2018		
CRSS Date:	03/05/2018	SAT Date:	03/06/2018	SAT Chair:	[redacted]
Consolidated PMN?					
Consolidated Set:					
Submitter:	[redacted]				
CAS Number:	1186514-12-4				
Ecotox Related Cases:	[redacted]				
Health Related Cases:					
Chemical Name:	Castor oil, reaction products with soybean oil				
Use:	[redacted]				
Trade name:	[redacted]				
PV Max (kg/yr):	[redacted]				
Ecotox Assessor:	[redacted]	Fate Assessor:	[redacted]	Health Assessor:	[redacted]

Physical Chemical Information

Molecular Weight:	[redacted]	Physical State - Neat:	[redacted]
Percent 500:		Percent 1000:	
Melting Point (Measured):	[redacted]	Melting Point (est):	
MP (EPI):			
Vapor Pressure:		Vapor Pressure (est):	[redacted]
VP (EPI):			
Water Solubility:	[redacted]	Water Solubility (EST):	
Water Solubility (EPI):			
Log Kow:			Log Kow (EPI):
Log P:			
Log P Comment:			

SAT Concern

Ecotox Rating (1):	3	Ecotox Rating Comment (1):	
Ecotox Rating (2):		Ecotox Rating Comment (2):	
Health Rating (1):	1	Health Rating Comment (1):	Uncerntain concerns for sensitization
Health Rating (2):		Health Rating Comment (2):	

PBT Ratings

Persistence	Bioaccumulation	Toxicity	Comments
2	1	1	

Exposure Based Review (Health)?	N
Exposure Based Review (Ecotox)?	N
SAT Keywords:	Sens-U

Fate Assessment Summary: P-18-0116

FATE: Estimations for low weight mono-glyceride, [redacted]

[redacted]

log Kow = [redacted]

S = [redacted]

VP < [redacted]

BP > [redacted]

H < [redacted]

log Koc = [redacted]

log Fish BCF = 1.50 (32) (E)

log Fish BAF = 1.17 (15) (E)

POTW removal (%) = 90 via sorption and biodeg; OECD 301F(Mano Resp): [redacted]

MSDS (no study report, inherent biodegradation): [redacted]

Time for complete ultimate aerobic biodeg = wk

Sorption to soils/sediments = moderate

PBT Potential: P2B1

*CEB FATE: Migration to ground water = slow

Bioconcentration factor to be put into E-FAST: 15

PMN Material:

Overall wastewater treatment removal is 90% via sorption and biodegradation.

Sorption to sludge is strong based on the estimated physical-chemical properties from EPISUITE.

Air Stripping (Volatilization to air) is negligible based on the estimated physical-chemical properties from EPISUITE.

Removal by biodegradation in wastewater treatment is high based on measured data for the PMN substance (OECD 301F (Mano Resp): [redacted] MSDS (no study report, inherent biodegradation): [redacted]).

Destruction of the substance in wastewater treatment is complete based on measured data for the PMN substance (OECD 301F (Mano Resp): [redacted]; MSDS (no study report, inherent biodegradation): [redacted]).

The aerobic aquatic biodegradation half-life is weeks based on measured data for the PMN substance (OECD 301F (Mano Resp): [redacted]; MSDS (no study report, inherent biodegradation): [redacted]).

The anaerobic aquatic biodegradation half-life is months based on the estimated aerobic biodegradation half-life. The anaerobic biodegradation half-life is projected to be greater than or equal to the aerobic biodegradation half-life.

Sorption to soil and sediment is moderate based on the estimated physical-chemical properties from EPISUITE.

Migration to groundwater is slow, mitigated by biodegradation.

PMN Material:

	Moderate Persistence (P2) is based on the aerobic and anaerobic biodegradation half-life. Low Bioaccumulation potential (B1) is based on BCFBAF model estimates. Bioconcentration/Bioaccumulation factor to be put into E-Fast: 15.
Removal in WWT/POTW (Overall):	90

Condition	Rating Values w/ Rating Description	Comment
WWT/POTW Sorption:	3	
WWT/POTW Stripping:	4	
Biodegradation Removal:	2	
Biodegradation Destruction:	2	
Aerobic Biodeg Ult:	2	
Aerobic Biodeg Prim:	2	
Anaerobic Biodeg Ult:	3	
Anaerobic Biodeg Prim:	3	
Hydrolysis (t1/2 at pH 7,25C) A:		
Hydrolysis (t1/2 at pH 7,25C) B:		
Sorption to Soils/Sediments:	3	
Migration to Ground Water:	2	
Photolysis A, Direct:		
Photolysis B, Indirect:		

Condition	Rating Values w/ Rating Description	Comment
Atmospheric Ox A, OH:		
Atmospheric Ox B, O3:		

Health Assessment

Health Summary:	Absorption: Dermal is NIL to poor, Lung is poor, GI is moderate based on p-chem properties. There is uncertain concern for sensitizaition based an equivocal response in the LLNA study.
Routes of Exposure:	Dermal Drinking Water Inhalation

Test Data Submitted

Test Data Submitted:	PMN: Genotoxicity is negative with and without activation in salmonella and V79 cells. Oral LD50 > 2000 mg/kg, dermal LD50 > 2000 mg/kg, dermal irritation in rabbits is negative, eye irritation in rabbits is negative. In the LLNA study, the results were equivocal for sensitization, poorly dose responsive and didn't exceed the threshold stimulation index of 2.7. The stimulation indexes were 1.37, 1.51 and 1.58 at doses of 2%, 10% and 50% and an EC3 value is not possible to calculate.

Ecotox Assessment

Test organism	Test Type	Test Endpoint	Predicted	Measured	Comments
Fish	96-h	LC50	1.1	[redacted]	[redacted]
Daphnid	48-h	LC50	1.6	[redacted]	[redacted]
Green Algae	96-h	EC50	0.44	[redacted]	[redacted]
Fish	-	Chronic Value	0.04		[redacted]
Daphnid	-	Chronic Value	0.49		[redacted]
Green Algae	-	Chronic Value	0.28	[redacted]	[redacted]

Factors	Most Sensitive Endpoint	Assessment Factor	CoC	Comment
Acute Acquatic:		4	110	
Chronic Acquatic:		10	4	

Ecotox Route of Exposure?	All releases to water

Factors	Values	Comments
SARs:	Esters	
SAR Class:	Esters-poly	

Factors	Values	Comments
TSCA NCC Category?	Esters	

Recommended Testing

Ecotox Value Comments

Predictions are based on the LMW [redacted] and QSARs for esters (ECOSAR V2.0); MW [redacted]; Log Kow = [redacted]).

Ecotox Factors Comments

Environmental hazard is relevant to whether a new chemical substance is likely to present unreasonable risks because the significance of the risk is dependent upon both the hazard (or toxicity) of the chemical substance and the extent of exposure to the substance. EPA estimated environmental hazard of this new chemical substance using the Ecological Structure Activity Relationships (ECOSAR) Predictive Model (https://www.epa.gov/tsca-screening-tools/ecological-structure-activity-relationships-ecosar-predictive-model) and hazard data on analogous chemicals. Based on these estimated hazard values from ECOSAR and hazard data on analogous chemicals, EPA concludes that this chemical substance is a high environmental hazard.

· Substance falls within the TSCA New Chemicals Category of Esters.

· ECOSAR chemical class of Esters-poly.

· High hazard based on an acute COC of 110 ppb and chronic COC of 4 ppb base on predicted values from ECOSAR chemical class Esters, based on the LMW [redacted])

Environmental Risks:

-Risks were not identified for ecotoxicity

Testing Recommendations:

-None

INITIAL REVIEW ENGINEERING REPORT [redacted]
PMN: 18-0116

Focus Ready Draft 3/22/2018
ENGINEER: Macek \ LMK \ JAS
PV (kg/yr): [redacted] Import Only

SUBMITTER: [redacted]

USE: [redacted]

OTHER USES: [redacted]

MSDS: Yes Label: No

Gen Eqpt: Use local and general exhaust ventilation to control levels of exposure. Ensure gloves remain in good condition during use and replace if any deterioration is observed. Permeation resistant gloves. Chemical safety goggles or safety glasses with side-shields. Wear cloth work clothing including long pants and long-sleeved shirts.

Respirator: None required under normal conditions of use.
Health Effects: May cause an allergic skin reaction.
TLV/PEL:

CRSS :

Chemical Name: Castor oil, reaction products with soybean oil

S-H20: [redacted]

VP: [redacted]

MW: [redacted]

Physical State and Misc CRSS Info:

Neat: [redacted] Mfg: NK: Import Proc/Form: [redacted]

Consumer Use: No

SAT (concerns) :

Related Cases and Misc SAT Info:

Analogs: [redacted]

Migration to groundwater: Slow

PBT rating: P2B1T

Health:

Eco: 2 Water (All releases to water with a CC = 4 ppb)

OCCUPATIONAL EXPOSURE RATING: 1B

NOTES & KEY ASSUMPTIONS:
Occupational exposure and environmental releases were estimated using the 9/30/2013 version of ChemSTEER tool. Input to ChemSTEER tool includes information from: the PMN submission, physical / chemical properties, and relevant past cases. This PMN is import only, therefore MFG is not assessed. The SAT report does not list concerns for health, but water releases are a concern (ppb=4) and migration to groundwater is slow. A full assessment was completed. // The following similar use past cases were referenced for consistency: [redacted] // PROC: This IRER assesses releases from equipment cleaning to uncertain media and from drum cleaning to landfill. It also assesses dermal exposures from unloading (consistent with all past cases).

POLLUTION PREVENTION CONSIDERATIONS:
P2 Claim: [redacted]

EXPOSURE-BASED REVIEW: No

INITIAL REVIEW ENGINEERING REPORT [redacted]

PMN: 18-0116

USE: Intermediate [redacted]

Number of Sites/ Location: [redacted]

[redacted]

Days/yr: [redacted]

Basis: The submission specifies [redacted] RAD assumes operating days = exposure days. CS calculates [redacted] kg PMN/batch.

Process Description: [redacted] (per submission)

ENVIRONMENTAL RELEASES ESTIMATE SUMMARY

IRER Note: The daily releases listed for any source below may coincide with daily releases from the other sources to the same medium. Note, the submission indicates [redacted].

Water or Incineration or Landfill

Output 1: [redacted]

basis: User-Defined Loss Rate Model. The submission does not estimate this release. Per March 2015 guidance on assessing releases of a chemical intermediate from reactor cleaning, RAD assumes 95-99% reaction, with 1% residual. Therefore, [redacted].

RELEASE TOTAL

[redacted]

OCCUPATIONAL EXPOSURES ESTIMATE SUMMARY

Tot. # of workers exposed via assessed routes: [redacted]

Basis:

Inhalation:

negligible [redacted]

Dermal:

Exposure to [redacted] concentration
High End:
> Potential Dose Rate: [redacted]
> Lifetime Average Daily Dose: [redacted]
> Average Daily Dose: [redacted]
> Acute Potential Dose: [redacted]
Number of workers (all sites) with dermal exposure: [redacted]
Basis: [redacted] Per November 2016 RAD guidance, default parameters for this model were updated: body weight (BW) was updated from 70 to 80 kg and Averaging Time over a Lifetime (ATc) was updated from 70 to 78 years. |

INITIAL REVIEW ENGINEERING REPORT [redacted]

PMN: 18-0116

Disposal: [redacted]

Number of Sites/ Location: [redacted]

[redacted]

Days/yr: [redacted]

Basis: The submission identifies [redacted]

Process Description:

ENVIRONMENTAL RELEASES ESTIMATE SUMMARY

IRER Note: The daily releases listed for any source below may coincide with daily releases from the other sources to the same medium.

Water
Output 2: [redacted]

from: [redacted]
basis: [redacted]

Landfill
Output 2: [redacted]

[redacted](per submission)
from: [redacted]
basis: User-Defined Loss Rate Model. [redacted]

RELEASE TOTAL
[redacted]

OCCUPATIONAL EXPOSURES ESTIMATE SUMMARY
Tot. # of workers exposed via assessed routes: [redacted]
Basis:

Inhalation:

negligible [redacted]

Dermal:

Exposure to [redacted]
High End:
> Potential Dose Rate: [redacted]
> Lifetime Average Daily Dose: [redacted]
> Average Daily Dose: [redacted]
> Acute Potential Dose: [redacted]
Number of workers (all sites) with dermal exposure: [redacted]
Basis: [redacted] Per November 2016 RAD guidance, default parameters for this model were updated: body weight (BW) was updated from 70 to 80 kg and Averaging Time over a Lifetime (ATc) was updated from 70 to 78 years.

[redacted]

MEMORANDUM of TELEPHONE CONVERSATION (Contains No TSCA CBI)

CALL BY:

Organization:

CALL TO:

Organization:

Date:

Time:

Phone:

Concerning what?

PMN: 18-0116